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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/719,928

11/21/2003

Ammar Al-Ali

MLABS.020A

3516

20995

7590

05/31/2005

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EXAMINER

Pretlow, Demetrius R

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/719,928	Applicant(s) AL-ALI, AMMAR	
	Examiner Demetrius R. Pretlow	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.  
 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-13 and 21-28 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 2-13, 21-23 and 25-28 is/are allowed.  
 6) ☒ Claim(s) 24 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Diab et al. (US 2001/0029326) in view of Kupotic et al. (US 6,470,199). Diab et al. teach communicating a drive signal from a monitor to a sensor. Note Figure 10 items, 300,304,302,320 makes up the sensor and the items to the right makeup the monitor, also note paragraph 158, lines 7-10. Diab et al. teach sequentially enabling a plurality of emitters of said sensor. Note Diab et al. paragraph, 161, lines 1-17. Diab et al. teach communicating a sensor signal from said sensor to said monitor. Note Figure 10 and paragraph 161, lines 5-13. Diab et al. teach synchronizing said sensor with said monitor. Note Figure 10 item 350. Diab et al. teach selecting a predetermined detector (320) corresponding to a selected emitter pair (300) of said sensor;

Diab et al. teach does not teach connecting said detector to pinouts of said sensor.

Kupotic et al. connecting said detector to pinouts of said sensor. Note Kupotic et al. column 5 lines 1-6.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Diab et al. to include the teaching of Kupotic et al. because it would allow the appropriate electrical drive and detection signals are communicated to and from the oximeter system. Note Kupotic et al. column 5, lines 4-6.

***Allowable Subject Matter***

The primary reason for the allowance of claims 2-5 is the inclusion of the limitations of a wavelength controller adapted to said upgrade so as to drive said sensor wherein said upgrade comprises a sampling software providing a drive waveform for said sensor and signal recessing software adapted to demodulate a multiplexed signal from said sensor. It is these limitations found in each of the claims as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 6 is the inclusion of the limitations of an a wavelength controller adapted to said upgrade so as to drive said sensor wherein said wavelength controller is located in an adapter cable, and said adapter cable providing an interface between the sensor port of said monitor and said sensor. It is these limitations found in each of the claims, as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 7 and 8 is the inclusion of the limitations of a wavelength controller adapted to said upgrade so as to drive said sensor, wherein said wavelength controller is integrated into said sensor. It is these limitations found in each of the claims, as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 9-13 is the inclusion of the limitations of an a wavelength controller adapted to said upgrade so as to drive said sensor wherein said wavelength controller comprises; a sensor control configured to route a drive signal to a selected one of a plurality of sensor emitters; and a sync detector adapted to decode a sync interval on said drive signal so as to synchronize the operations of said software upgrade and said wavelength controller. It is these limitations found in each of the claims, as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 21 –23 is the inclusion of the method step of communicating a sensor signal from said sensor to monitor wherein synchronizing step comprises the substeps of: inputting said drive signal to a wavelength controller; and decoding a header interval of said drive signal so as to detect a sync event. It is these steps found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 25-28 is the inclusion of the limitations of a multiple wavelength sensor means for illuminating a tissue site with at least three wavelengths and detecting a corresponding tissue site response; of an a software upgrade means for enabling a pulse oximetry monitor to drive said sensor and process a corresponding sensor signal; and a wavelength controller means for

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interfacing between said software upgrade means and said multiple wavelength sensor means. It is these limitations found in each of the claims, as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (571) 272-2278. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Demetrius R. Pretlow

*Demetrius Pretlow* 5/19/05

Patent Examiner

**BRYAN BUI  
PRIMARY EXAMINER**

*Bryan Bui*  
5/26/05